Title: The School Store

Link to Outcomes:

- **Problem Solving** Students will show ability to solve a problem in real life by choosing the operation.
- **Communication** Students will read, discuss, and write mathematical problems.
- **Reasoning** Students will be able to explain how they solved the problem.
- **Connections** Students will relate to actual experiences by purchasing items at the school store.
- **Number Sense & Numeration** Students will use place value concepts to solve problems.
- **Concepts of Whole Number Operations** Students will be able to choose between addition and subtraction to solve the problem.
- **Whole Number Computation** Students will use addition and subtraction to achieve results.

Brief Overview:

This lesson deals with the price of items from a school store to illustrate problem solving. Students choose the operation necessary to complete the given problem, explain what was done and why it was done, thereby showing understanding of the problem solving concepts.

Grade/Level:

Beginning Grade 3 Mathematics

Duration/Length:

This lesson will take 3 ½ class periods over 4 days. The introductory lesson is 30 minutes long. Others last 40 minutes to an hour, depending on student ability.

Prerequisite Knowledge:

Students need a basic understanding of:

- Addition of 2- or 3-digit numbers with or without regrouping
- Subtraction of 2- or 3-digit numbers with or without regrouping
- Problem solving strategies for addition
- Problem solving strategies for subtraction

Objectives:

- The students will be able to choose between the operations of addition or subtraction and use that choice to solve the problem.

Materials/Resources/Printed Materials:

- Poster board
- Markers
- Chalk
- Chalkboard
- Pencils and paper
- Practice worksheet #1
- Overhead projector
- Transparency with 3 practice problems

Development/Procedures:

Day 1: Introduction

- Make a price chart of items sold in the school store by having students name the items sold in the store. The teacher will list the items on a chart.

- Assigns teams with leaders to find, within 10 minutes, the price of a set of items sold in the school store. - pencils, erasers, pencil toppers, sharpeners, paper, tablets, etc.

- Teams should then report item prices. Team leaders add items to the class chart.

Day 2:

- Review the school store price chart with the students, placing the chart in student view.

- Students will be placed in teams by the teacher.

- Proceed with problem solving strategies using the school store chart (Guided practice).

- Ask the class "If you were to buy a pencil and an eraser, how much money will you spend?" Allow wait time for student response. Have a student name the operation used and show computation to the class on the chalkboard. Next ask "If I give you $1.00 to go to the school store to buy a pencil sharpener, how much change will you bring back?" Allow wait time for student response. Have a student name the operation used and show computation on the chalkboard. Then ask "If you take $.75 to the school store and return to class with $.15, how much did you spend?" Allow time for student response. Have a student name the operation used and show computation to the class on the chalkboard.

- The teacher will assign a practice problem worksheet to each team. Allow 15 minutes for team work.

- The teams will share answers with the class.

Day 3:

- Use the overhead projector, and have the students copy and solve three problems independently.

- The students share answers with the class by naming the operation used and showing computation on the chalkboard. Students make any necessary corrections.

- The students return to their teams and make up at least three word problems using the school store chart.

- The teacher will collect the word problem from each team.

Day 4:

- The students will return to their previous teams and the teacher will pass out the word problems from Day 3.

- The teams will trade problems and work them out cooperatively. The teacher will be monitoring the students' progress by circulating around the classroom.

Evaluation:

- Each student will individually write and solve at least three word problems using the school store chart.

Extension/Follow Up:

- Make a class store by each student bringing an item from home and assigning a price to it.

- Name coins and their individual value and use them to simulate purchases at the class store.

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Practice Problems (Day 2)

1. **If you were to buy a pencil sharpener and a pencil topper, how much would you spend?**

2. **You have $.80 and buy a tablet, how much would be left?**

3. **If you had $.45 and get $.10 change, how much did you spend?**

4. **How many sheets of paper can you buy for $.90?**

Transparency Problems

The school store sells pencils and pencil toppers.

1. **How many pencils can you buy for $1.00?**

2. **How many pencil toppers can you buy for $1.00?**

3. **How many pencils and equal amount of pencil toppers can you buy for $1.00?**